

Product description



Product name Human cTNI SIL-protein



Catalog number TN946116

Uniprot ID P19429

Human cardiac Troponin I (cTNI) is a calcium-dependent regulator of cardiac muscle, it is a protein biomarker for diagnosing the myocardial infarction (1).

Labelled cTNI is a recombinant protein, stable isotope labelled (SIL), designed for use as an internal standard for quantitative analysis of cTNI by mass spectrometry (MS).

Protein sequence

MSGSHHHHHHSSGIEGRADGSSDAAREPRPAPAPIRRRSSNYRAYATEPHAKKKSKISASRKLQLKTLTLLQIAKQELEREAEERRGEGKGRALSTR
CQPLELAGLGFAELQDLRQLHARVDKVDDEERYDIEAKVTKNITEIADLTQKIFDLRGKFKRPTLRRVRISADAMMQALLGARAKESLDLRAHLK
QVKKEDTEKENREVDWRKNIDALSGMEGRKKKFES

Product features and protocols

Key features

- 1 Purity >95%
as determined by SDS-PAGE
- 2 Labelling Uniform-¹⁵N
- 3 Isotopic incorporation >99%
as determined by LC-MS/MS
analysis of digested SIL-protein

Other features

| | |
|-------------------|---|
| Predicted MW | 25.75 kDa |
| Expression System | <i>E. coli</i> |
| Purification Tag | PolyHis tag at the N-terminus end |
| Protein content | Quantification is carried out by Bradford protein assay |
| Formulation | Lyophilized from 20 mM Tris pH=8.0 buffer. |

Template009-datasheet protein-V01 TN946116_V01

Product preparation

For product preparation we recommend the following steps:

1. Briefly centrifuge the tube before opening
2. Reconstitute by adding the appropriate volume of **20 mM Tris pH=8.0, 5 mM DTT buffer** for a final concentration of 200 µg/ml (e.g. 50 µl for 10 µg conditioning)
3. Vortex gently to insure complete dissolution
4. Wait 15 minutes at room temperature before proceeding further
5. Vortex gently again and centrifuge briefly

Product storage

The product is lyophilized and shipped at room temperature. **Store at -80 °C upon receipt.**

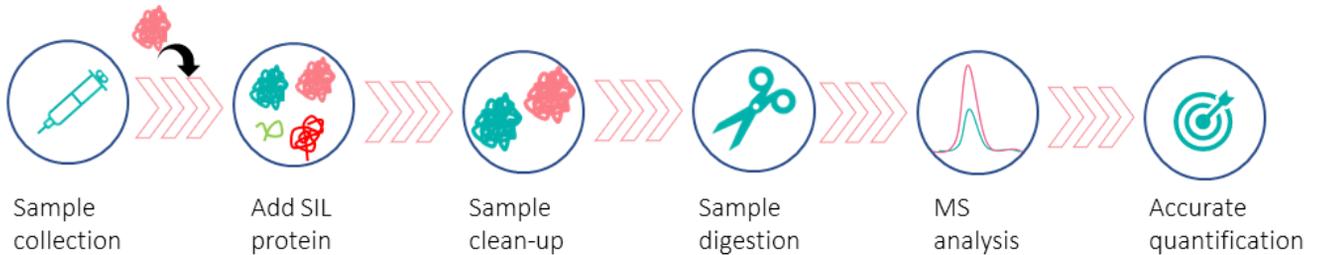
After reconstitution, the protein can be preserved at 4°C for a few weeks.

Avoid multiple freeze-thaw cycles

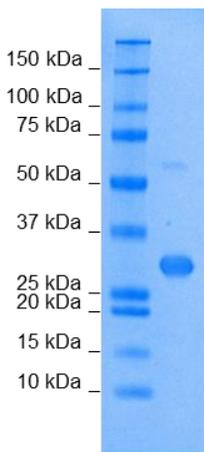
How to use our product



SIL proteins allow to overcome the process variability since they are added at the very beginning of a sample preparation. This has potential positive impact on your analyte quantification, especially if the analyte interacts with other species commonly present within the matrix (2).



Supporting information



SDS-PAGE gel analysis of cTNI protein in Reduced/Heated conditions (RH) and stained with Coomassie blue.

References

1. **Schneck et al.** Quantification of cardiac troponin I in human plasma by immunoaffinity enrichment and targeted mass spectrometry, *Anal. Bioanal. Chem.* 2018, 11, 2805-2013
2. **G.Picard, D. Lebert, et al.** PSAQ standards for accurate MS-based quantification of proteins: from the concept to biomedical applications, *J. Mass Spectrom.* 2012, 47, 1353-1363



The product is intended for research use only. Not for diagnostic or therapeutic use.

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